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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,098	12/03/2003	Stephen Jay Sanderson	360-0012US.	4404
29855	7590	10/31/2005	EXAMINER	
WONG, CABELLO, LUTSCH, RUTHERFORD & BRUCCULERI, P.C. 20333 SH 249 SUITE 600 HOUSTON, TX 77070			LIE, ANGELA M	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/727,098

Applicant(s)

SANDERSON ET AL.

Examiner

Angela M. Lie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-9 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 10-13, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 4 and 14-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/3/2003</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the substrate must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show elements 8 and 9 as two separate layers, as described in the specification. The

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applicant is advised by the examiner to provide an additional drawing showing the side view of the invention, so that particular layers can be clearly identified. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamai et al (US Patent 4851734).

As to claim 1 Hamai discloses an electroluminescent lamp comprising: a first section of transparent (Figure 5, element 1, top portion), electrically conductive material selectively patterned on a surface of a substrate (Figure 5, element 2); a second section of transparent (Figure 5, element 1, bottom portion), electrically conductive material selectively patterned on the surface of the substrate (Figure 5, element 2), wherein the second section of transparent, electrically conductive material is electrically isolated from first section of transparent, electrically conductive material (as shown in figure 5, the glass frame isolates two electrodes); a first integral fusible link (Figure 5, thinner portion of the element 4) between a first electrode input power contact (Figure 5, element 4) and the first section of transparent, electrically conductive material (Figure 5, element 1, top portion); a second integral fusible link (Figure 5, thinner portion of the element 4, the bottom portion) between a second electrode input power contact (Figure 5, element 4, bottom part) and the second section of transparent, electrically conductive material (Figure 5, element 1, bottom portion); wherein the first fusible link or the second fusible link fails to allow current to flow if a certain level of current is exceeded (since fusible link (thinner portion of element 4) is thinner than the main power supplying wire (4), it allows certain voltage to pass through it which is smaller in magnitude than the voltage that could pass through the main connection (4), once overvoltage occurs i.e.

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more than the thinner portion or fusible link can withstand, this wire is likely to melt and in result no voltage can reach the rest of the circuitry).

As to claim 10, Hamai teaches an apparatus, which is inherently formed by the method, disclosed in claim 10.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2,3,5,6,11,12,19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamai et al (US Patent 4851734) in the view of Ikeda (US Publication 2003/0168967).

As to claims 2 and 11, Hamai teaches all the limitations disclosed in claim 1, however he does not teach that transparent conductive material comprises indium tin oxide (ITO). Ikeda teaches an EL sheet wherein a conventional EL sheet comprises a transparent electrode layer of indium tin oxide (paragraph 2, lines 3-4). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to incorporate Ikeda's teaching into Hamai's invention, and make a transparent electrode of indium tin oxide because this material is commonly used in EL displays and lamps, furthermore ITO can be precisely deposited on the substrate by electron-beam

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evaporation or sputtering (both well known in the art), this precise deposition is important especially when devices have to be produced in a small sizes, and in addition to all that ITO can withstand up to high temperatures for instance 500 degrees Celsius, which is very important feature because lamps heat up to very high temperatures (<http://www.cerac.com/pubs/proddata/ito.htm>).

As to claims 3 and 12, Hamai teaches all the limitations disclosed in claim 1, however he does not teach the substrate comprising polyethylene terephthalate. Ikeda teaches that a conventional EL sheet comprises a substrate made of polyethylene terephthalate (PET)(paragraph 2, lines 1-3). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use Ikeda's teaching and make a transparent substrate of polyethylene terephthalate because polyethylene terephthalate can withstand high temperature (for instance it is often used in trays for oven use), it also has good strength and hardness. All those features are advantages in a substrate used in an electroluminescent lamp, where temperatures reach high levels (<http://www.designinsite.dk/htmsider/m0011.htm>)

As to claims 5 and 19, Hamai teaches a fluorescent paint layer disposed on the surface of the transparent electrode. He does not teach however that this layer is a phosphor layer. Ikeda teaches that conventional electroluminescent sheet has a phosphor containing light emitting layer (paragraph 2, lines 8-9). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use phosphor instead of fluorescent paint for the light emitting layer because phosphor is very well known in the art, and it is commonly used what makes it fairly inexpensive.

As to claims 6 and 20, Hamai and Ikeda teach all the limitations presented in claims 5 and 19 respectively, Hamai also teaches a dielectric layer (Figure 5, element 5, wherein air is also an example of dielectric) deposited onto the phosphor layer (instead of fluorescent paint as explained in justification for rejecting claims 5 and 19).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamai et al (US Patent 4851734) in the view of Jabbour et al (Screen Printing for the Fabrication of Organic Light-Emitting Devices, IEEE 2001). Hamai teaches all the limitations disclosed in claim 10, but he does not teach that depositing a transparent, electrically conductive material onto a surface of a substrate comprises the step of screen printing the transparent, electrically conductive material onto selected portions of the substrate. Jabbour et al teach screen-printing method as an inexpensive and accurate method for fabricating light emitting devices (Abstract). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to use screen printing method as taught by Jabbour et al, in order to deposit a transparent layer as taught by Hamai, because screen printing method is inexpensive and precise in depositing material in a specified area. (Abstract and Introduction).

#### ***Allowable Subject Matter***

9. Claims 7-9 are allowed.

10. The following is an examiner's statement of reasons for allowance:

As to claim 7, the prior art fails to teach an electroluminescent lamp comprising: a first section of indium tin oxide, a second section of indium tin oxide, a carbon filled



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conductive composition, a phosphor layer, a dielectric layer, a first input power contact, a second input power contact, a first fusible link, a second fusible link, wherein all those elements are connected in the manner as disclosed in claim 7.

As to claims 8 and 9, those claims are allowed by the virtue of their dependency on claim 7.

11. Claims 4 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 4 and 18, the prior art fails to teach an electroluminescent lamp as disclosed in claim 1, further comprising a carbon filled conductive composition deposited onto the transparent, electrically conductive material.

As to claim 14, the prior art fails to teach the method as disclosed in claim 10, wherein the step of depositing a transparent, electrically conductive material onto a surface of a substrate comprises the step of removing a portion of the transparent, electrically conductive material.

As to claims 15-17, those claims would be allowable by the virtue of their dependency on claim 14.

### ***The Prior Art***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent 4458177 discloses a flexible electroluminescent lamp device.
- US Patent 5976613 discloses a method of making an electroluminescent lamp.

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela M. Lie whose telephone number is 571-272-8445. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Angela M Lie



TUYET VO  
PRIMARY EXAMINER